THE UTILITY OF ENTOMOLOGY

All the forces of nature are interdependent. Many plants would not bear seeds or fruit were it not for the activity of insects, which cause the pollen to be deposited upon the pistil and the seed-vessel to be fertilized. Attempts were made many years ago to grow clover in Australia, but the clover did not make seed. All the seed required for planting had to be imported at much expense from Europe. It was finally ascertained that the reason why the clover failed to make seed was because throughout Australia there were no bumblebees. Bumblebees were introduced, and now clover grows luxuriantly in Australia, making seed abundantly; and Australian meats, carried in the cold-storage rooms of great ocean steamers, are used to feed the people of Manila, Hong-Kong, Yokohama, and even London.

A few years ago the orange-groves in southern California became infested with a scale-insect, which threatened to ruin them and to bring orange-growing in that part of the land to an unprofitable end. The matter received the careful attention of the chief entomologist of the United States Department of Agriculture, the lamented Professor C. V. Riley. In the course of the studies which he and his associates prosecuted, it was ascertained that the same scale-insect which was ruining the orange-groves of California is found in the orange-groves of Queensland, but that in Queensland this insect did comparatively small injury to the trees. Investigation disclosed the fact that in Queensland the scale-insect was kept down by the ravages of a parasitic insect which preyed upon it This parasite, by order of the chief entomologist, was immediately imported, in considerable numbers, into southern California, and let loose among the orange-groves.
The result has been most beneficial.

These are two illustrations, from among hundreds which might be cited, of the very practical value of entomological knowledge.

The annual loss suffered by agricultural communities through ignorance of entomological facts is very great. Every plant has its insect enemy, or, more correctly, its insect lover, which feeds upon it, delights in its luxuriance, but makes short work, it may be of leaves, it may be of flowers, it may be of fruit It has